1. A telephone to packet adapter comprising:

a telephone line interface configured to be connected to a telephone line;

a telephone interface configured to be connected to a telephone set;

a Local Area Network interface configured to be connected to a packet network;

a controller circuit interconnecting said telephone line interface, said telephone interface and said Local Area Network interface; said controller circuit being so configured as to route said telephone interface to one of said telephone line and said Local Area Network interfaces depending on at least one preestablished routing rule.

2. A telephone to packet adapter as recited in claim 1, wherein said Local Area Network interface is configured to be connected to a packet Network via a Local Area Network.

3. A telephone to packet adapter as recited in claim 1, wherein said Local Area Network interface is configured to be connected to a packet network via a Local Area Network packet network gateway.

4. A telephone to packet adapter as recited in claim 1, wherein said controller circuit includes an embedded agent software controlling the routing of the telephone interface.

5. A telephone to packet adapter as recited in claim 1, wherein said at least one preestablished routing rule is such that a) said telephone interface is routed to said telephone line interface when a dialled telephone number is a local call and b) said telephone interface is

routed to said Local Area Network interface when the dialled telephone number is not a local call.

6. A telephone to packet adapter as recited in claim 1, wherein said at least one preestablished routing rule is such that said telephone interface is routed to said telephone line interface when no packet network address corresponding to a dialled telephone number exist.

7. A telephone to packet adapter as recited in claim 1, wherein said at least one preestablished routing rule is such that said telephone interface is routed to said telephone line interface when a dialled telephone number is an emergency number.

8. A telephone to packet adapter as recited in claim 1, wherein said controller circuit includes a telephone number database of telephone numbers that may be reached via the packet network; said at least one preestablished routing rule is such that a) said telephone interface is routed to said telephone line interface when a dialled telephone number is not present in said telephone number database and b) said telephone interface is routed to said Local Area Network interface when the dialled telephone number is listed in said telephone number database.

9. A telephone to packet adapter as recited in claim 1, wherein said at least one preestablished routing rule is such that said telephone interface is routed to said telephone line interface when said packet network is inactive.

10. A telephone to packet adapter as recited in claim 1, further including a speech encoder/decoder associated to said controller circuit to encode and decode data routed by said controller circuit.

11. A telephone to packet adapter comprising:

a telephone line interface configured to be connected to a telephone line;

a telephone interface configured to be connected to a telephone set;

a Local Area Network interface configured to be connected to a Local Area Network;

a packet network interface configured to be connected to a packet network; and

a controller circuit interconnecting said telephone line interface, said telephone interface, said Local Area Network interface and said packet network interface; said controller circuit being so configured as to either a) route said telephone interface to one of said telephone line and said packet network interfaces and b) route said Local Area Network interface to one of said telephone line and said packet network interfaces, ~~depending on at least one preestablished routing rule.~~

12. A telephone to packet adapter as recited in claim 11, wherein said controller circuit includes an embedded agent software controlling the routing of said telephone and Local Area Network interfaces.

13. A telephone to packet adapter as recited in claim 11, wherein said at least one preestablished routing rule is such that a) one of said telephone interface and said Local Area Network interface is routed to said telephone line interface when a dialled telephone number is a local call and b) one of said telephone interface and said Local Area Network interface is routed to said Local Area Network interface when the dialled telephone number is not a local call.

14. A telephone to packet adapter as recited in claim 11, wherein said at least one preestablished routing rule is such that one of said telephone interface and said Local Area Network interface is routed to said telephone line interface when no packet network address corresponding to a dialled telephone number exist.

15. A telephone to packet adapter as recited in claim 11, wherein said at least one preestablished routing rule is such that one of said telephone interface and said Local Area Network interface is routed to said telephone line interface when a dialled telephone number is an emergency number.

16. A telephone to packet adapter as recited in claim 11, wherein said controller circuit includes a telephone number database of telephone numbers that may be reached via the packet network; said at least one preestablished routing rule is such that a) one of said telephone interface and said Local Area Network interface is routed to said telephone line interface when a dialled telephone number is not present in said telephone number database and b) one of said telephone interface and said Local Area Network interface is routed to said Local Area Network interface when the dialled telephone number is listed in said telephone number database.

17. A telephone to packet adapter as recited in claim 11, wherein said at least one preestablished routing rule is such that one of said telephone interface and said Local Area Network interface is routed to said telephone line interface when said packet network is inactive.

18. A telephone to packet adapter as recited in claim 11, further including a speech encoder/decoder associated to said

controller circuit to encode and decode data routed by said controller circuit.

19. A method for routing telephone calls to a packet network via a telephone to packet adapter provided with a telephone line interface, a telephone interface, a Local Area Network interface and a controller circuit interconnecting the telephone line, telephone and Local Area Network interfaces; said method comprising the steps of:

connecting a telephone line to the telephone line interface;

connecting a telephone set to the telephone interface;

connecting a packet network to the Local Area Network interface;

running an agent software for routing the telephone interface to either the conventional telephone line interface and the Local Area Network interface depending on at least one preestablished routing rule.

20. A routing method as recited in claim 19, wherein said packet network connecting step includes the substep of connecting a Local Area Network to the Local Area Network interface; wherein the Local Area Network is connected to a packet network.

21. A routing method as recited in claim 19, wherein said at least one preestablished routing rules includes a local call routing rule; said local call routing rule dictates that the telephone interface is to be routed to the telephone line interface when a number dialled onto the telephone set is a local call.

22. A routing method as recited in claim 19, wherein said at least one preestablished routing rules includes a long distance call

routing rule; said long distance call routing rule dictates that the telephone interface is to be routed to the Local Area Network interface when a number dialled onto the telephone set is a long distance call.

5   23. A routing method as recited in claim 19, wherein said at least one preestablished routing rules includes a default routing rule; said local default routing rule dictates that the telephone interface is to be routed to the telephone line interface when either a) a number dialled onto the telephone set has no corresponding packet network 10   address and b) the packet network is inactive.

           24. A routing method as recited in claim 19, wherein said at least one preestablished routing rules includes an emergency call routing rule; said emergency call routing rule dictates that the telephone 15   interface is to be routed to the telephone line interface when a number dialled onto the telephone set is an emergency number.

           25. A routing method as recited in claim 19, wherein said at least one preestablished routing rules includes a database 20   determined routing rule; said database determined routing rule dictates that a) the telephone interface is routed to the Local Area Network interface when a number dialled onto the telephone set is present in a database of the controller circuit; and b) the telephone interface is routed to the telephone line interface when a number dialled onto the telephone 25   set is not present in the database.

           26. A method for routing telephone calls to a packet network via a telephone to packet adapter provided with a telephone line interface, a telephone interface, a Local Area Network interface, a packet 30   network interface and a controller circuit interconnecting the telephone

line, telephone, packet network and Local Area Network interfaces; said method comprising the steps of:

connecting a telephone line to the telephone line interface;

connecting a telephone set to the telephone interface;

connecting a Local Area Network to the Local Area Network interface;

connecting a packet network interface to the packet network interface;

running an agent software for routing either a) the telephone interface to one of the conventional telephone line interface and the packet network interface, and b) the Local Area Network interface to one of the conventional telephone line interface and the packet network interface, depending on at least one preestablished routing rule.

27. A routing method as recited in claim 26, wherein said at least one preestablished routing rules includes a local call routing rule; said local call routing rule dictates that one of the telephone interface and the Local Area Network interface is to be routed to the telephone line interface when a number dialled onto the telephone set is a local call.

28. A routing method as recited in claim 26, wherein said at least one preestablished routing rules includes a long distance call routing rule; said long distance call routing rule dictates that one of the telephone interface and the Local Area Network interface is to be routed to the Local Area Network interface when a number dialled onto the telephone set is a long distance call.

29. A routing method as recited in claim 26, wherein said at least one preestablished routing rules includes a default routing rule; said local default routing rule dictates that one of the telephone

interface and the Local Area Network interface is to be routed to the telephone line interface when either a) a number dialled onto the telephone set has no corresponding packet network address and b) the packet network is inactive.

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30. A routing method as recited in claim 26, wherein said at least one preestablished routing rules includes an emergency call routing rule; said emergency call routing rule dictates that one of the telephone interface and the Local Area Network interface is to be routed to the telephone line interface when a number dialled onto the telephone set is an emergency number.

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31. A routing method as recited in claim 26, wherein said at least one preestablished routing rules includes a database determined routing rule; said database determined routing rule dictates that a) one of the telephone interface and the Local Area Network interface is routed to the Local Area Network interface when a number dialled onto the telephone set is present in a database of the controller circuit; and b) one of the telephone interface and the Local Area Network interface is routed to the telephone line interface when a number dialled onto the telephone set is not present in the database.

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